

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

Johnstone, Douglas Ian
BARON & WARREN
19 South End, Kensington
London W8 5BU
GRANDE BRETAGNE

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NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing
(day/month/year)

25.10.2004

Applicant's or agent's file reference
MR/38023

IMPORTANT NOTIFICATION

International application No.
PCT/GB 03/02771

International filing date (day/month/year)
27.06.2003

Priority date (day/month/year)
28.06.2002

Applicant
ALPHA THAMES LTD

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international
preliminary examining authority:



European Patent Office - P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 70 340 - 2040 Tx: 31 651 epo nl
Fax: +31 70 340 - 3016

Authorized Officer

Ter Haar, H

Tel. +31 70 340-3817



PATENT COOPERATION TREATY

PCT



INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

| | | | |
|--|--|--|--|
| Applicant's or agent's file reference MR/38023 | | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416) | |
| International application No. PCT/GB 03/02771 | International filing date (day/month/year) 27.06.2003 | Priority date (day/month/year) 28.06.2002 | |
| International Patent Classification (IPC) or both national classification and IPC E21B21/00 | | | |
| Applicant ALPHA THAMES LTD | | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
 - ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

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|---|---|
| Date of submission of the demand 26.01.2004 | Date of completion of this report 25.10.2004 |
| Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016 | Authorized Officer van Berlo, A Telephone No. +31 70 340-3535  |

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/GB 03/02771**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-6 as originally filed

Claims, Numbers

1-9 filed with telefax on 24.09.2004

Drawings, Sheets

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|-----|
| Novelty (N) | Yes: Claims | 1-9 |
| | No: Claims | |
| Inventive step (IS) | Yes: Claims | 1-9 |
| | No: Claims | |
| Industrial applicability (IA) | Yes: Claims | 1-9 |
| | No: Claims | |

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. The following documents are referred to in this communication:
D1: EP-A-0 201 263 (MOBIL NORTH SEA LTD) 12 Nov. 1986 (1986-11-12)
D2: WO 01/87453 A (TVEITEN MAGNAR ;KELLOGG BROWN & ROOT INC (US)) 22 Nov. 2001 (2001-11-22)

2. The document D2, which is considered to be the closest prior art, discloses in particular in page 4 line 2-5, page 8 line 18-20, page 9 line 17 to page 10 line 8 and figures 1-5 (the references in parentheses applying to this document):

A system (100) for removing particulates from water, comprising separating means (130) for removing particulates from water, and pumping means (144) downstream from the separating means for drawing water upstream of the separating means into the separating means, characterised in that the separating means comprises dynamic separating means comprising a hydrocyclone (page 4, line 3) and the system further includes means (133) for collecting particulates separated from said water by the dynamic separating means, means (136) for removing collected particulates from the particulate collecting means.

The system of D2 differs from the subject-matter of claim 1 by the fact that

- a) claim 1 is aimed at an underwater hydrocarbon reservoir water injection system rather than a system for the disposal of drilling solids,
- b) in claim 1 the system draws in surrounding water, which is not the case in D2,
- c) the system of claim 1 is incorporated into a retrievable module for use with a modular seabed processing system,
- d) the system of claim 1 contains means for directing at least some of the at least substantially particulate free water from the dynamic separating means to the particulate removal means to enable the particulate removal means (7,32) to remove collected particulates and eject them into water surrounding the module.

- 2.1 The subject-matter of claim 1 is therefore novel (Article 33(2) PCT).
Aspect a) and b), both part of the preamble of the independent system claim are known in the art, see for example D1.
Aspect c), i.e. incorporation into a retrievable module is considered to be trivial to

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB 03/02771

the skilled man in the art.

The remaining problem to be solved by the present invention may therefore be regarded as:

Removing collected particulates (page 2, line 29 to page 3, line 2)

- 2.2 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

By directing some particulate free water from the dynamic separating means to the particulate removal means to eject the collected particulates into surrounding water, the power available from the dynamic separating means is used to remove collected particulates, thereby avoiding the need of a separate system to remove collected particulates.

- 2.3 Claims 2-7 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

- 2.4 Since the subject-matter of independent method claim 8 corresponds to the subject-matter of claim 1, the same reasoning as given for claim 1 will apply mutatis mutandis. Therefore claim 8 also meets the requirements of the PCT in respect of novelty and inventive step (Article 33(2) and (3) PCT).

- 2.5 Claim 9 is dependent on claim 8 and as such also meets the requirements of the PCT with respect to novelty and inventive step.

OTHER REMARKS

- No documents reflecting the prior art, such as D1 and D2, are identified in the description (Rule 5.1(a)(ii) PCT).